

CLAIMS

1. A vacuum cleaning device powered by compressed air, comprising:
 - an elongate canister having a top end, a bottom end, and an internal chamber;
 - an elongate handle secured to the canister and extending above the top end of the canister and by which the canister can be held and manipulated;
 - a venturi and nozzle assembly in fluid flow communication with the top end of the internal chamber adapted to be connected to a source of compressed air whereby compressed air is directed from the nozzle through the venturi to create a vacuum in the internal chamber and having an outlet for air passing through the venturi;
 - a vacuum intake pipe secured to the canister and extending below the bottom end of the canister and into the chamber terminating in fluid flow communication with the chamber intermediate the top and bottom of the chamber;
 - a baffle deflector in the chamber arranged with respect to the termination of the vacuum intake pipe to deflect air and any debris and liquid entering the chamber from the vacuum pipe downwardly toward the bottom of the chamber;
 - a drain opening for draining liquid and debris from the chamber;
 - means for closing the drain opening to prevent liquid and debris in the chamber from draining through the drain opening; and
 - user operated means for opening the drain opening when desired to drain liquid and debris from the chamber.
2. A vacuum cleaning device according to Claim 1, wherein the means for closing the drain opening is a plug.
3. A vacuum cleaning device according to Claim 2, wherein the plug is biased into the opening to close it.

4. A vacuum cleaning device according to Claim 3, wherein the user operated means for opening the drain opening moves the plug against the bias out of position closing the drain to open the drain.

5. A vacuum cleaning device according to Claim 4, wherein the user operated means for opening the drain includes a shaft connected to the plug so the plug moves with longitudinal movement of the shaft, a spring biasing the shaft to move the plug into the drain opening, and a handle on the shaft by which a user can move the shaft against the spring bias to open the drain.

6. A vacuum cleaning device according to Claim 5, wherein the drain opening extends through the bottom end of the canister, the shaft extends through the top end of the canister, and the handle on the shaft is located above the top of the canister.

7. A vacuum cleaning device according to Claim 6, wherein the spring extends between the top end of the canister and the handle.

8. A vacuum cleaning device according to Claim 1, additionally including a conduit extending into the chamber through which liquid can be pumped from the chamber.

9. A vacuum cleaning device according to Claim 8, wherein the conduit is adapted to be connected to a liquid pump.

10. A vacuum cleaning device according to Claim 9, wherein the conduit extends through the top of the canister into the chamber.

11. A vacuum cleaning device according to Claim 1, additionally including a filter around the outlet for air passing through the venturi.

12. A vacuum cleaning device according to Claim 11, wherein the filter is a vacuum cleaner bag removably positioned around the outlet.

13. A vacuum cleaning device according to Claim 11, additionally including a housing about the outlet for air passing through the venturi, and wherein the filter is a vacuum cleaner bag removably positioned around the housing.

14. A vacuum cleaning device according to Claim 13, additionally including filter material held in the housing.

15. A vacuum cleaning device according to Claim 14, wherein the housing additionally includes a bypass opening which can be opened when desired to allow air passing through the venturi to bypass the filter material held in the housing and pass directly into the vacuum cleaner bag.

16. A vacuum cleaning device according to Claim 11, additionally including a housing about the outlet for air passing through the venturi, and wherein the filter is filter material held in the housing.

17. A vacuum cleaning device according to Claim 16, wherein the filter material acts as a muffler.

18. A vacuum cleaning device according to Claim 1, additionally including attachment ends for the vacuum intake pipe.

19. A vacuum cleaning device according to Claim 16, wherein an attachment end for the vacuum intake pipe forms an end for sliding across a floor to vacuum up a liquid on the floor.

20. A vacuum cleaning device according to Claim 17, wherein the attachment also includes a brush for brushing the floor.

21. A vacuum cleaning device powered by compressed air, comprising:
an elongate canister having a top end, a bottom end, and an internal chamber;
an elongate handle secured to the canister and extending above the top end of the canister and by which the canister can be held and manipulated;
a venturi and nozzle assembly in fluid flow communication with the top end of the internal chamber adapted to be connected to a source of compressed air whereby compressed air is directed from the nozzle through the venturi to create a vacuum in the internal chamber and having an outlet for air passing through the venturi;

a vacuum intake pipe secured to the canister and extending below the bottom end of the canister and into the chamber terminating in fluid flow communication with the chamber intermediate the top and bottom of the chamber;

a baffle deflector in the chamber arranged with respect to the termination of the vacuum intake pipe to deflect air and any debris and liquid entering the chamber from the vacuum pipe downwardly toward the bottom of the chamber; and

a conduit extending into the chamber through which liquid can be pumped from the chamber.

22. A vacuum cleaning device according to Claim 19, wherein the conduit is adapted to be connected to a liquid pump.

23. A vacuum cleaning device according to Claim 20, wherein the conduit extends through the top of the canister into the chamber.

24. A drain for a vacuum cleaning device powered by compressed air and having a collection chamber which collects liquids and debris picked up by the device, comprising:

a drain opening into the collection chamber for draining liquid and debris from the chamber; means for closing the drain opening to prevent liquid and debris in the chamber from draining through the drain opening; and

user operated means for opening the drain opening when desired to drain liquid and debris from the chamber.

25. A drain for a vacuum cleaning device powered by compressed air and having a collection chamber which collects liquids and debris picked up by the device, comprising:

a conduit extending into the chamber through which liquid can be pumped from the chamber; and

means for connecting a source of vacuum to the conduit to suck liquid and debris from the chamber.